

We claim:

1. A two component carbohydrate mixture suitable for incorporation into an enteral nutritional comprising:
 - a) a source of fructose from about 5 wt/wt% to about 50 wt/wt% of the two component carbohydrate mixture; and
 - b) at least one digestible glucose polymer source from about 50 wt/wt% to about 95 wt/wt% of the two component carbohydrate mixture.
2. A carbohydrate system suitable for incorporation into an enteral nutritional comprising:
 - a) at least about 43 wt/wt% of said carbohydrate system is the two component carbohydrate mixture of claim 1; and
 - b) less than about 57 wt/wt% of said carbohydrate system is nutrients selected from the group consisting of nonabsorbent carbohydrates, dietary fiber and indigestible oligosaccharides.
3. The carbohydrate system according to claim 2 wherein said nonabsorbent carbohydrates comprise less than about 20 wt/wt% of the carbohydrate system.
4. The carbohydrate system according to claim 2 wherein said dietary fiber comprises less than about 17 wt/wt% of the carbohydrate system and said dietary fiber is selected from the group consisting of soluble fiber, insoluble fiber, fermentable fiber, non-fermentable fiber and mixtures thereof.
5. The carbohydrate system according to claim 2 wherein said indigestible oligosaccharides comprise less than about 20 wt/wt% of the carbohydrate system.
6. A nutritional product comprising:
 - a) a two component carbohydrate mixture comprising from about 25% to about 60% of the total calories of the product, said two component carbohydrate mixture comprising:
 - i) a source of fructose from about 5 wt/wt% to about 50 wt/wt% of the two component carbohydrate mixture; and

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- ii) at least one digestible glucose polymer source from about 50 wt/wt% to about 95 wt/wt% of the two component carbohydrate mixture,
 - b) a source of fat comprising less than about 37% of the total calories of the product; and
 - c) a source of protein comprising from about 10% to about 35% of the total calories of the product.

7. The nutritional product of claim 6 wherein the source of fat comprises from about 25% to about 30% of the total calories of the product.

8. The nutritional product of claim 6 wherein the source of protein comprises from about 15% to about 25% of the total calories of the product.

9. The nutritional product of claim 6 wherein the two component carbohydrate mixture comprises from about 35% to about 55% of the total calories of the product.

10. The nutritional product of claim 6 further including at least one additional nutrient selected from the group consisting of vitamin A, vitamin B₁, vitamin B₂, vitamin B₆, vitamin B₁₂, vitamin C, vitamin D, vitamin E, vitamin K, biotin, carnitine, taurine, folic acid, pantothenic acid, niacin, choline, calcium, phosphorus, magnesium, zinc, manganese, copper, sodium, potassium, chloride, iron, selenium, chromium and molybdenum.

11. A nutritional product comprising:

- a) from about 25% to about 60% of the total calories of the product as carbohydrate system, said carbohydrate system further comprises;
- i) a source of fructose from about 5 wt/wt% to about 50 wt/wt% of the carbohydrate system,
 - ii) at least one digestible glucose polymer source from about 50 wt/wt% to about 95 wt/wt% of the carbohydrate system,
 - iii) less than about 20 wt/wt% of the carbohydrate system as nonabsorbent carbohydrates;

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- b) a source of fat comprising less than about 37% of the total calories of the product; and
- c) a source of protein comprising from about 10% to about 35% of the total calories of the product.

12. The nutritional product according to claim 11 wherein said carbohydrate system further comprises less than about 17 wt/wt% of the carbohydrate system as dietary fiber selected from the group consisting of soluble fiber, insoluble fiber, fermentable fiber, non-fermentable fiber and mixtures thereof.

13. The nutritional product according to claim 11 wherein said carbohydrate system further comprises less than about 20 wt/wt% of the carbohydrate system as indigestible oligosaccharides.

14. The nutritional product of claim 11 wherein the source of fat comprises from about 25% to about 30% of the total calories of the product.

15. The nutritional product of claim 11 wherein the source of protein comprises from about 15% to about 25% of the total calories of the product.

16. The nutritional product of claim 11 wherein the carbohydrate system comprises from about 35% to about 55% of the total calories of the product.

17. The nutritional product of claim 11 further including at least one additional nutrient selected from the group consisting of vitamin A, vitamin B₁, vitamin B₂, vitamin B₆, vitamin B₁₂, vitamin C, vitamin D, vitamin E, vitamin K, biotin, carnitine, taurine, folic acid, pantothenic acid, niacin, choline, calcium, phosphorus, magnesium, zinc, manganese, copper, sodium, potassium, chloride, iron, selenium, chromium and molybdenum.

18. A nutritional product comprising:

- a) about 47% of the total calories of the product as a carbohydrate system, said carbohydrate system further comprises;
- i) about 23 wt/wt% of the carbohydrate system is a source of fructose,

- ii) about 64 wt/wt% of the carbohydrate system is digestible glucose polymers,
 - iii) about 6.5 wt/wt% of the carbohydrate system is nonabsorbent carbohydrates,
 - iv) about 3 wt/wt% of the carbohydrate system is fiber selected from the group consisting of soluble fiber, insoluble fiber, fermentable fiber, non-fermentable fiber and mixtures thereof
 - v) about 3.5 wt/wt% of the carbohydrate system is indigestible oligosaccharides,
- b) a source of fat comprising about 33% of the total calories of the product; and
- c) a source of protein comprising about 20% of the total calories of the product.

19. The nutritional product of claim 18 further including at least one additional nutrient selected from the group consisting of vitamin A, vitamin B₁, vitamin B₂, vitamin B₆, vitamin B₁₂, vitamin C, vitamin D, vitamin E, vitamin K, biotin, carnitine, taurine, folic acid, pantothenic acid, niacin, choline, calcium, phosphorus, magnesium, zinc, manganese, copper, sodium, potassium, chloride, iron, selenium, chromium and molybdenum.

20. A method for providing nutrition to an individual with diabetes comprising enterally administering the nutritional product according to claim 6.

21. A method for providing nutrition to an individual with diabetes comprising enterally administering the nutritional product according to claim 11.

22. A method for providing nutrition to an individual with diabetes comprising enterally administering the nutritional product according to claim 18.

23. A method for blunting the postprandial glycemic response comprising enterally administering the two component carbohydrate mixture according to claim 1.

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1. The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as $t \rightarrow \infty$. It is shown that the solutions of the system (1) tend to zero as $t \rightarrow \infty$ if and only if the matrix A is stable.